

10 Feb.

Work Order ID 156584

156584

Page 1

Wednesday, February 01, 2017 11:16:33 AM

Accept

N000040100

Setup Start *NS1*

Stop *NS2*

Revision ID:

Item Name: Side Plate Assembly

Start Date: 2/1/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 2/7/2017 Req'd Qty: 4.00

4

Customer:

Reference:

Run Start *NR1*

Approvals: Process Plan:  Date FEB 01 2017 Tooling: _____ Date: _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D4972	A
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100

0.02

100

Waterjet

FLOW CNC Waterjet

Memo

1-Cut D4972-1 as per Dwg

Dwg Rev: Prog Rev: 

2-Deburr if necessary

0.03

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Quality Control

Memo

0.01

(4)

02/17/03

(4)

02/17/03

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

AEROSPACE

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Quality ☐ Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Composite ☐ Supplier ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
		OTHER :							

Work Order ID 156584***156584***

Wednesday, February 01, 2017 11:16:33 AM

Page 2

Item ID: D4972-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Side Plate Assembly

Start Date: 2/1/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 2/7/2017 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.01

Quality Control

DAS
38
9-89
FEB 03 2017

130

Bend as per dwg
FLOW WATER JET

0.00

130

Brake NC

Memo

0.02

Brake NC

C'SINK HOLES AS PER DWG

DAS
30
9-89

4x

DAS
36
9-89
17/02/06

140

QC5- Inspect part completeness to step on W/O

0.00

140

QC

Memo

0.01

Quality Control

DAS
38
9-89

4

FEB 06 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : _____									

Work Order ID 156584

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156584

Page 3

Item ID: D4972-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Side Plate Assembly
Start Date: 2/1/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 2/7/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Chemical Conversion Coat per QSI005 4.1	0.00							
150									
HandFinish	Memo	0.03							
Hand Finishing									
160	QC7-Inspect Chemical Conversion Coat	0.00							
160									
QC	Memo	0.01							
Quality Control									
170	Black Sandtex(Ref:4.3.5.7) per QSI005 4.3	0.00							
170	Small Fab								
Powdercoat	Memo	0.01							
Powder Coating									

START TIME: 2:35
OVEN TEMPERATURE: 320°
FINISH TIME: 3:05

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER :							

Work Order ID 156584

Wednesday, February 01, 2017 11:16:33 AM

156584

Page 4

Item ID: D4972-041**Accept*****N900040100*****Setup Start*****NS1*****Revision ID:****Stop*****NS2*****Item Name:** Side Plate Assembly**Start Date:** 2/1/2017 **Start Qty:** 4.00***4*****Cust Item ID:****Required Date:** 2/7/2017 **Req'd Qty:** 4.00***4*****Customer:****Reference:****Approvals:****Process Plan:** _____**Date:** _____**Tooling:** _____**Date:** _____**Run Start*****NR1*****QC:** _____**Date:** _____**SPC (Y/N):** _____**Date:** _____**Stop*****NR2*****Sequence ID/
Work Center ID****Operation
Description****Set Up/
Run Hours****Tool ID****Tool #****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

180

QC3- Inspect Part Finish

0.00

180

QC

Memo

0.01

Quality Control

4X

17/02/08
DAS 36 9-88

190

0.00

190

Small Fab

Memo

0.02

Small Fab

ASSEMBLE AS PER DWG

4X

17/02/08
DAS 36 9-88

200

QC5- Inspect part completeness to step on W/O

0.00

200

QC

Memo

0.01

Quality Control

4

FEB 08 2017
DAS 36 9-88

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 156584

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156584

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Item ID: D4972-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Side Plate Assembly
Start Date: 2/1/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 2/7/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	Identify as per dwg & Stock Location: <u>5H022</u>	0.00							
210									
Packaging	Memo	0.01							DAS 6 9-89
Packaging									
220	QC21- Final Inspection - Work Order Release	0.00							
220									
QC	Memo	0.07							DAS 21 9-89
Quality Control									

FEB 10 2017

Picklist Print

Wednesday, February 01, 2017 11:16:38 AM

Page 1

Work Order ID: 156584

156584

Parent Item: D4972-041

D4972-041

Parent Item Name: Side Plate Assembly

Start Date: 2/1/2017

Required Date: 2/7/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 13.11.19 NEW ISSUE DD VERF:JLM IPP
REV:B 14.04.01 AS RE DWG REV.A DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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M6061T6S.040		Purchased	No				sf	114.1100		2.484211			
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M6061T6S 040

6061-T6 .040 Sheet

**

17/02/03

Location	Loc Qty	Loc Code
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MAT021	114.11	
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m135612	28.9	
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m135632	5.81	
---------	------	--

m135724	79.4	
---------	------	--

MS20426AD3-3		Purchased	No				Each	4,540.000		16			
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MS20426AD3-3

RIVET

**

17/02/08 DAS 36 9-89

Location	Loc Qty	Loc Code
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fg108	280	
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M134946	200	
---------	-----	--

M135354	80	
---------	----	--

GA	1590	
----	------	--

M135274	1590	
---------	------	--

ST312	2670	
-------	------	--

M135274	2670	
---------	------	--

MS21059L3		Purchased	No				Each	143.0000		8			
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MS21059L3

Nut Plate

**

17/02/08 DAS 36 9-89

Location	Loc Qty	Loc Code
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GA	55	
----	----	--

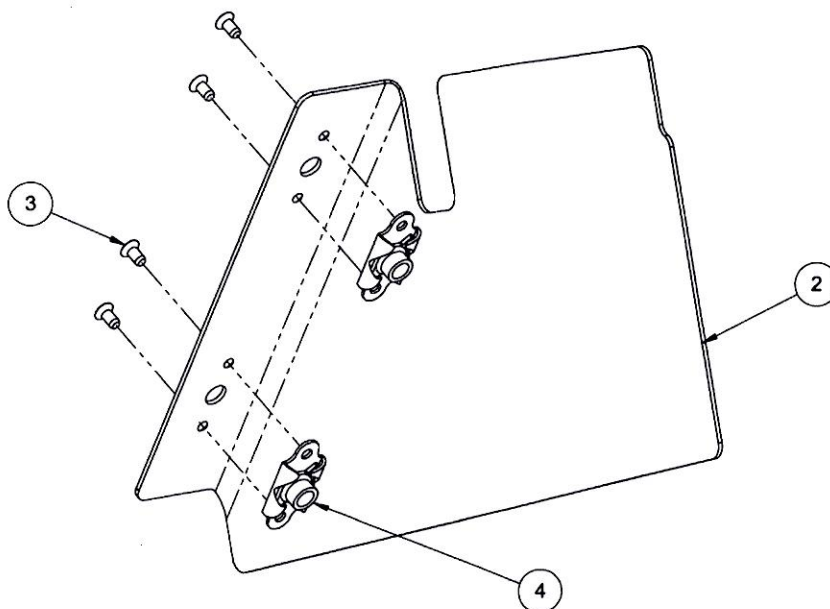
M136047	55	
---------	----	--

ST301	88	
-------	----	--

M135774	23	
---------	----	--

M136450	65	
---------	----	--

ITEM	QTY -041	PART NUMBER	DESCRIPTION
1	X	D4972-041	SIDE PLATE ASSY
2	1	D4972-1	SIDE PLATE
3	4	MS20426AD3-3	RIVET (NASM20426AD3-3)
4	2	MS21059L3	NUT PLATE (NASM21059L3)



D4972-041 SIDE PLATE ASSY

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 156584 *[Signature]*
FEB 01 2017

RELEASED
2014-03-31 *[Signature]*

NOTES:
1) MATERIAL: N/A
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
7) WEIGHT: 0.09 LBS

APPROVED

A	NEW ISSUE	DB	14.01.20
REV.	DESCRIPTION	BY	DATE
DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DB		
CHECKED	DC	DRAWING NO.	REV. A
MFG. APPR.	DD	SIDE PLATE ASSY	SHEET 1 OF 2
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	D4972	NTS
DATE	14.01.20	COPYRIGHT © 2014 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

